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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/716,392	11/20/2000	Thomas G. Houman	USG-3368	8631

7590 10/17/2002
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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 10/17/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/716,392

Applicant(s)

HOUMAN ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-13, and 18-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-13, 18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. All outstanding rejections are overcome by applicants' amendment filed 8/5/02, Paper No. 4.

The new grounds of rejection as set forth below are necessitated by applicants' amendment and thus, the following rejection is final.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 4-13, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takaoka et al. (U.S. 6,063,472) in view of Andersen et al. (U.S. 6,180,037).

Takaoka et al. disclose a composition comprising 0.5-18% resin and 70% or less aggregate particles such as calcium carbonate which have particle size of 0.03-2 mm which clearly overlaps the requirement in the present claims that the particles pass through a 30 mesh, i.e. 0.6 mm, screen and are retained on a 50 mesh, i.e. 0.3 mm, screen. The aggregate particles form a layer with a thickness of 0.1-3 mm or 0.004-0.118 inches. It is disclosed that the resin increases adhesion strength, i.e. functions as a binder (col.4, lines 29-42, col.5, lines 5-6, 9-10, 12-15, 43-53, and 58-63, col.6, lines 14-17, and col.9, lines 23-30).

As defined on page 5, lines 1-3 of the present specification, a drying-type composition is one that contains calcium carbonate filler. Given that Takaoka et al. disclose the use of calcium carbonate (col.3, lines 46-47), it is clear that the composition is dryable as presently claimed.

Further, given that Takaoka et al. disclose composition identical to that presently claimed including particle size of aggregates, it is clear that the composition is intrinsically sprayable.

The difference between Takaoka et al. and the present claimed invention is the requirement in the claims (a) of the number of aggregate particles per square inch and (b) that the composition is settable.

With respect to difference (a), Andersen et al., which is drawn to sheets prepared from composition comprising binder and aggregate particles, disclose that particle packing is a primary factor for designing the desired requirements for the final product such as workability, stability, shrinkage, bulk density, elasticity, etc. and further disclose that the particle packing density of the aggregate greatly affects the rheology and workability of the composition. For instance, the more closely packed the particles, the less liquid required to fill the interstitial space between the particles which in turn affects the rheological properties of the composition such as workability (col.21, lines 50-60 and col.36, line 44-col.37, line 4).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to choose how to space the aggregate particles and thus, the number of particles used per square inch, including that presently claimed, in Takaoka et al. in order to produce a composition with the desired properties such as workability, stability, shrinkage, bulk density, elasticity, etc., and thereby arrive at the claimed invention.

With respect to difference (b), it is noted that page 5, lines 3-4 of the present specification define a setting-type composition as one which comprises calcium sulfate hemi-hydrate. Takaoka et al. is silent with respect to the use of such compound.

Andersen et al., which is drawn to sheets prepared from composition comprising binder and aggregate particles, disclose the use of gypsum hemihydrate, i.e. calcium sulfate hemihydrate, as an aggregate in order to impart binding and strength to the composition (col.26, lines 63-67 and col.27, lines 17-22) as well as affect the rheology of the composition (col.37, lines 30-38).

In light of the motivation for using gypsum hemihydrate disclosed by Andersen et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such aggregate in the composition of Takaoka et al. in order to produce a settable composition with good adhesion and strength as well as suitable rheology, and thereby arrive at the claimed invention.

Response to Arguments

4. Applicants' arguments with respect to Kano et al. (U.S. 5,891,948) and Caldwell (U.S. 5,869,166) have been considered but they are moot in view of the discontinuation of these references against the present claims.

5. Applicants' arguments filed 8/5/02 have been fully considered but they are not persuasive.

Specifically, applicants argue that:

(a) Takaoka et al. do not disclose self-gauging coating composition having improved abuse resistance as presently claimed and that the aggregates disclosed by Takaoka et al. are generally smaller than presently claimed.

Although there is no disclosure in Takaoka et al. of self-gauging composition, it is noted that the recitation in the claims that the composition is a self-gauging coating is merely an intended use, i.e. composition "suitable for use as a self-gauging coating". Applicants attention is drawn to MPEP 2111.02 which states that intended use statements must be evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the Examiner's position that the intended use recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art and further that the prior art structure is capable of performing the intended use. Given that Takaoka et al. disclose composition comprising resin binder and aggregate as presently claimed including amounts of binder and aggregate, size of aggregate, and thickness of aggregate layer as claimed, it is clear that the composition of Takaoka et al. would be capable of performing the intended use, i.e. self-gauging coating, presently claimed as required in the above cited portion of the MPEP.

Further, with respect to the particle size of the aggregate, it is noted that the particle size disclosed by Takaoka et al., i.e. 0.03-2 mm completely overlaps that presently claimed, i.e. i.e. at least 90% of the particles pass through 30 mesh, i.e. 0.6 mm, screen, and at least 90% of the particles are retained on a 50 mesh, i.e. 0.3 mm screen. Further, given the disclosure of the present claims, i.e. "at least 90% of the particles" are retained or pass through certain mesh screens, it is clear that the aggregate can contain some particles which fall above and below the

claimed particle size. It is also noted that there is no requirement in the present claims regarding the abuse resistance of the composition.

(b) Takaoka et al. fails to disclose the particle count required by all the claims and that Andersen et al. does not provide any disclosure to meet this limitation.

It is agreed that Takaoka et al. do not explicitly disclose the number of aggregate particles present per square inch as required in the present claims. However, this is why Takaoka et al. is used in combination with Andersen et al.

It is significant to note that Takaoka et al. disclose aggregates that have particle size that overlaps that presently claimed and further disclose that the aggregate particles form layer of thickness that overlaps that presently claimed. Thus, for a given area, the coating of Takaoka et al. would possess the same number of particles $((\text{area} \times \text{thickness}) / \text{volume of aggregate particle})$ as the coating of the present invention. While there is no disclosure of the aggregate particle density, i.e. number of aggregate particles present per square inch, in Takaoka et al., Andersen et al. teach that particle packing is a primary factor for designing the desired requirement for the final product such as workability, stability, shrinkage, bulk density, elasticity, etc. and further disclose that the particle packing density of the aggregate greatly affects the rheology and workability of the composition. For instance, the more closely packed the particles, the less liquid required to fill the interstitial space between the particles which in turn affects the rheological properties of the composition such as workability.

Thus, given that Takaoka et al. disclose the same number of particles as present in the instant invention and in light of the motivation of Andersen et al. for closely packing aggregate

particles, it would have been obvious to one of ordinary skill in the art that when the particles in Takaoka et al. are closely packed the number of aggregate particles per square inch would intrinsically fall within the values presently claimed.

(c) The 1.132 declaration filed 8/5/02 establishes that the composition disclosed by Hirano et al. is not suitable for use as self-gauging composition as presently claimed.

The declaration compares the pencil hardness of the compositions of Takaoka et al. as set forth in Tables 2, 4, and 7 of the reference, with the pencil hardness, as calculated by applicants, of examples 1-3 found in the present specification. It is shown that the compositions of the present invention possess higher pencil hardness than the compositions disclosed in the examples of Takaoka et al.

However, it is noted that there is no requirement in the present claims regarding the level of abuse resistance or hardness of the coating composition. Further, given that col.2, lines 60-61 of Takaoka et al. disclose that the coating composition can have pencil hardness of B or above, this would appear to include all levels of pencil hardness including 6H, the pencil hardness of the coating compositions of the present invention. Although there are no examples that show such pencil hardness, from the disclosure in col.2, lines 60-61 of Takaoka et al., it is clear that the reference clearly encompasses compositions with such hardness.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Callie Shosho
10/15/02


VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1714